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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/570,749	11/12/2007	Chandalata Raghu Kumar	007292-01 US	8728

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EXAMINER
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ARIANI, KADE

ART UNIT	PAPER NUMBER
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1651

MAIL DATE	DELIVERY MODE
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11/03/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/570,749	<b>Applicant(s)</b> RAGHU KUMAR ET AL.	
	<b>Examiner</b> KADE ARIANI	<b>Art Unit</b> 1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2010 and 16 August 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 1-8, 10 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### ***DETAILED ACTION***

The amendment filed on March 30, 2010, and supplemental amendment filed on August 16, 2010 have been received and entered.

Claims 1-17 are pending in this application and were examined on their merits.

### ***Objections***

The objections to claim 1 and the "Title" are withdrawn due to Applicant's amendments to the claims filed on 03/30/2010 and 08/16/2010.

Claims 1-8, 10, 17, the Abstract, and the Specification are objected to because of the following informalities:

In claim 1 (line 1) insert --using unidentified white-rot fungus NIOCC #2a deposited under accession number MTCC 5159-- after "effluents".

In claim 1 (line 3) delete "an isolated white-rot fungus strain NIOCC2A" and insert --the unidentified white-rot fungus NIOCC #2a-- in its place.

In claim 1 (line 4) insert --in a medium-- after 5159.

In claim 1 (line 7) delete "C and N" and insert --carbon and nitrogen-- in its place.

In claim 1 (line 12) insert --produced by the fungus-- after (EPS).

In claim 1 (line 21) delete "(f)" and insert --(e)-- in its place.

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In claim 2 (line 3) delete "waste-waters" and insert --wastewaters-- in its place.

In claim 3 (line 1) delete "fungal biomass" and insert --fungus-- in its place.

In claim 4 (line 1), claim 5 (line 2), claim 6 (line 1), claim 7 (line 2), and claim 8 (line 1) delete "growing" and insert --culturing-- in its place.

In claim 10 (line 1) delete "fungal biomass" and insert --fungus-- in its place.

In claim 17 delete "An isolated" and insert --A biologically pure culture of the unidentified-- in its place.

In claim 17 (line 2) delete "strain NIOCC2A" and insert --NIOCC #2a-- in its place.

In claim 17 (line 4 continued on the next page) insert --and-- after "filamentous"

#### Abstract:

In Abstract (line 4) insert --white-rot-- after "unidentified".

#### Specification:

In the specification (page 1 line 4) insert --white-rot-- after "unidentified".

In the specification (page 4 line 7) insert --white-rot-- after "unidentified".

Appropriate correction is required.

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

“and; c) exhibits 99% homology to an unidentified basidiomycete species  
AY187277” (in claim 17, lines 5-6), and

“or any other conventional known immobilization support” (in claim 16, lines 2-3).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The invention appears to employ a strain of fungus. It is not clear if the written description is sufficiently repeatable to avoid the need for a deposit. Further it is unclear if the starting materials were readily available to the public at the time of invention.

It appears that a deposit was made in this application as filed as noted, on page 1 lines 5-10 and page 4 lines 25-30, of the specification. However, it is not clear if the

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deposit meets all of the criteria set forth in 37 CFR 1.801-1.809. Applicant or applicant's representative may provide assurance of compliance with the requirements of 35 U.S.C § 112, first paragraph, in the following manner.

#### SUGGESTION FOR DEPOSIT OF BIOLOGICAL MATERIAL

A declaration by applicant, assignee, or applicant's agent identifying a deposit of biological material and averring the following may be sufficient to overcome an objection and rejection based on a lack of availability of biological material.

1. Identifies declarant.
2. States that a deposit of the material has been made in a depository affording permanence of the deposit and ready accessibility thereto by the public if a patent is granted. The depository is to be identified by name and address.
3. States that the deposited material has been accorded a specific (recited) accession number.
4. States that all restriction on the availability to the public of the material so deposited will be irrevocably removed upon the granting of a patent.

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5. States that the material has been deposited under conditions that access to the material will be available during the pendency of the patent application to one determined by the Commissioner to be entitled thereto under 37 CFR 1.14 and 35 U.S.C § 122.

6. States that the deposited material will be maintained with all the care necessary to keep it viable and uncontaminated for a period of at least five years after the most recent request for the furnishing of a sample of the deposited microorganism, and in any case, for a period of at least thirty (30) years after the date of deposit for the enforceable life of the patent, whichever period is longer.

7. That he/she declares further that all statements made therein of his/her own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the instant patent application or any patent issuing thereon.

Alternatively, it may be averred that deposited material has been accepted for deposit under the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the purpose of Patent Procedure (e.g. see 961 OG 21, 1977) and

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that all restrictions on the availability to the public of the material so deposited will be irrevocably removed upon the granting of a patent.

Additionally, the deposit must be referred to in the body of the specification and be identified by deposit (accession) number, date of deposit, name and address of the depository and the complete taxonomic description.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The rejection of claim 17 under 35 U.S.C. 101, because the claimed invention is directed to non-statutory subject matter, is withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.



The rejection of claim 17 under 35 U.S.C. 102(b) as being anticipated by Pointing et al. (World Journal of Microbiology & Biotechnology, 2000, Vol. 16, p.199-205) as evidenced by GenBank, basidiomycete sp. HKUCC 4062, is withdrawn.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The rejection of claim 1-16 under 35 U.S.C. 103(a) as being unpatentable over Raghukumar et al. (US Patent No. 6,613,559 B2) in view of Galhaup et al. (Microbiology, 2002, Vol. 148, 2159-2169) and Abadulla et al. (Applied and Environmental Microbiology, 2000, Vol. 66, No.8, p.3357-3362) and Spencer et al. (Biotechnology and Bioengineering, 1973, Vol. XV, p.1-12), is withdrawn.

### ***Answer to Arguments & Declaration***

Applicant arguments and Declaration filed on 08/16/2010, regarding deposit of the biological material are fully considered, however they are insufficient to overcome

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the rejection of claims 1-17 under 35 U.S.C. 112, first paragraph (Deposit of the Biological material), because;

The deposit should meet all of the criteria set forth in 37 CFR 1.801-1.809. The biological material deposited must be specifically identified in the application for patent as filed, as mentioned in the previous office action (of 09/30/2009) the deposit must be referred to in the body of the specification and be identified by deposit (accession) number, date of deposit, name and address of the depository and the complete taxonomic description. Therefore, the rejection is maintained.

Amendment of the specification to recite the date of deposit, and the complete taxonomic description, in addition to the complete name and address of the depository is required.

### ***Conclusion***

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kade Ariani whose telephone number is (571) 272-6083. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on (571) 272-0926. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kade Ariani/  
Examiner, Art Unit 1651